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(71) Applicant (for all designated States except US): SCANT-
ECH HOLDINGS, LLC [US/US]; 430 Tenth Street,
N.W., Suite N-205, Atlanta, GA 30318 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ELYAN, Vladimir,
V. [RU/RU]; 45-56 Bolschaya Gruzinskaya str., Moscow
123056 (RU). BEKHTEV, Boris, V. [RU/RU]; 52-8,

Verkhnie Polya str., Moscow 109369 (RU). BOWSER,
Gary, F. [US/US]; 2702 CR 68, Auburn, IN 46706 (US).
SYCHEV, Boris, S. [RU/RU]; 84-11 Millionstchikova str.,
Moscow, 115487 (RU). UVAROV, Vitaly, A. [RU/RU];
105-40/3, Veyernaya str., Moscow 119501 (RU).

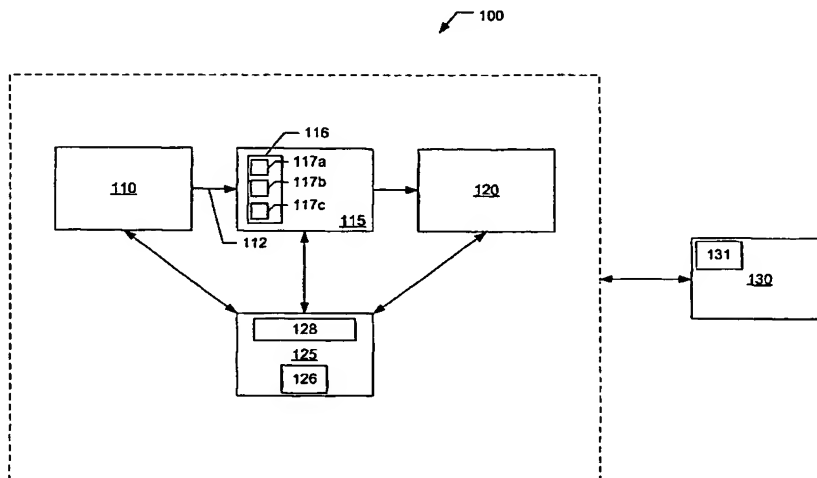
(74) Agent: COURSEY, R., Stevan; Troutman Sanders LLP,
Suite 5200, 600 Peachtree Street, NE, Atlanta, GE 30308-
2216 (US).

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GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,
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[Continued on next page]

(54) Title: SYSTEM FOR ALTERNATELY PULSING ENERGY OF ACCELERATED ELECTRONS BOMBARDING A CON-
VERSION TARGET



(57) Abstract: A RF linear electron accelerator system for generating a beam of accelerated electrons bunched in pulses having different energy spectra from pulse to pulse. The system is operable to generate a beam of high energy X-rays from such beam of accelerated electrons, using a conversion target (225), with pulses of the X-ray beam (112) having energy spectra which are different from X-ray pulse to X-ray pulse. Preferably, the pulses of the electron beam (222) have energy spectra which alternate from pulse to pulse and, correspondingly, the pulses of the X-ray beam (112) have energy spectra which alternate from pulse to pulse. Also preferably, the current of electrons injected into the system's accelerating section (220) and the frequency of the pulse RF power supplied to the accelerating section (220) are changed in a synchronized manner to generate the electron beam (222). The system is employable in an inspection system (100) for discriminating materials present in containers by atomic numbers.

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International application No.

PCT/US03/30499

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01N 23/04

US CL : 378/63

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 378/63; 372/2, 30, 32, 24, 26

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,101,239 (KAWASAKI et al) 08 August 2000 (08.08.2000), see the entire document	1-2

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Paul Ip

Telephone No. (703) 306-3329

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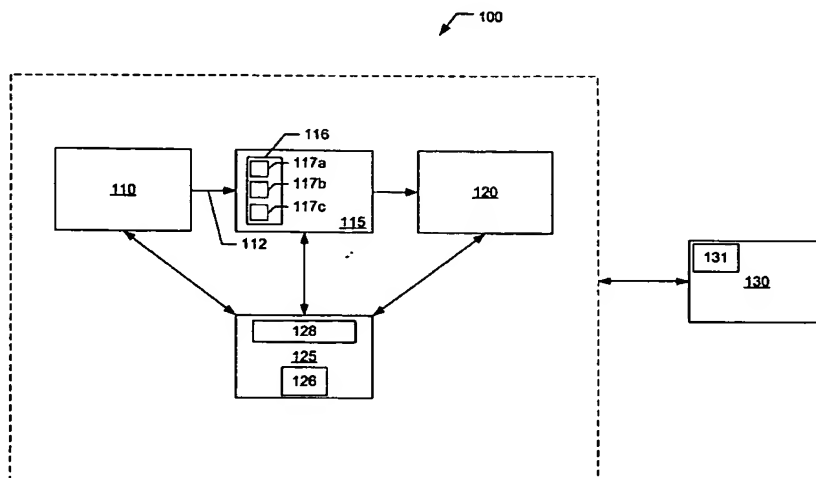
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